

REMARKS

This communication is a full and timely response to the non-final Office Action dated February 3, 2005 (Paper No./Mail Date 01192005). By this communication, Applicant has amended claims 2 and 4-9.

Claim 2 has been amended to recite that said signal processing system includes a phase shifter that generates an I signal and a Q signal by demodulating the intermediate-frequency signal output from said second receiving system so that said I signal and said Q signal coincide with each other in phase. Support for the subject matter added to claim 2 can be found variously throughout the specification and claims, for example, in original claim 4. No new matter has been added.

Claim 4-8 have been amended to idiomatic English and form, where applicable. No new matter has been added.

Claim 9 has been amended to recite that when said IF stage includes a quadrature demodulator, said signal processing system includes a phase shifter that generates an I signal and a Q signal that coincide with each other in phase. Support for the subject matter added to claim 9 can be found variously throughout the specification and claims, for example, in original claim 4. No new matter has been added.

Claims 2 and 4-9 are pending where claims 2 and 9 are independent.

Claim Objections

Claim 2 was objected to because allegedly the terms "BPSK" and "IF" were not defined. Further, claim 2 was objected to because allegedly the selection of either one of a variable gain amplifier or quadrature modulator is not clear. Claim 2 has been amended to replace "BPSK" with "binary phase shift keying" and to replace "IF" with "intermediate frequency." Furthermore, the "at least one of" language has been deleted from claim 2. Based on at least these amendments, Applicant respectfully requests that the objection to claim 2 be withdrawn.

Rejections Under 35 U.S.C. §102

Claim 9 was rejected under 35 U.S.C. §102(e) as anticipated by *Camp Jr., et al.*, U.S. Patent No. 6,097,974. Applicant respectfully traverses this rejection.

Claim 9 recites a portable terminal apparatus comprising a first receiving system for receiving a quadrature modulated signal and converting the quadrature modulated signal into an

intermediate-frequency signal for output; a second receiving system comprising at least one system for receiving a binary phase shift keying modulated signal and converting the binary phase shift keying modulated signal into an intermediate-frequency signal for output; an intermediate frequency stage for processing both the intermediate-frequency signal of said first receiving system and the intermediate-frequency signal of said second receiving system; and a signal processing system for processing the signal of said first receiving system that has been passed through said intermediate frequency stage and the signal of said second receiving system that has been passed through said intermediate frequency stage, wherein when said intermediate frequency stage includes a quadrature demodulator, said signal processing system includes a phase shifter that generates an I signal and a Q signal that coincide with each other in phase.

In other words, claim 9 is directed to a signal processing circuit in a digital portable telephone apparatus having a GPS function has a phase shifter for making an I signal and a Q signal obtained by demodulating a binary shift keying modulated signal coincide with each other in phase and an adder for combining both I and Q signals after their respective phases coincide.

Camp Jr. discloses a wireless mobile terminal that includes a GPS Radio Frequency (RF) and a wide bandwidth radiotelephone RF GPS RF signal chip frequency. The wireless mobile terminal includes a GPS RF receiver 410 a radiotelephone RF receiver 420 a shared intermediate frequency (IF) section 430, and a demodulator 450 that is responsive to the shared IF section 430.

Camp Jr., however, fails to disclose, teach, or suggest at least that said signal processing system includes a phase shifter that generates an I signal and a Q signal that coincide with each other in phase.

To properly anticipate a claim, the document must disclose, explicitly or implicitly, each and every feature recited in the claim. See Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *Camp Jr.* fails to disclose, teach, or suggest every element recited in independent claim 9, therefore these claims are not anticipated by *Camp Jr.* Accordingly, Applicant respectfully requests that the rejection of claim 9 under 35 U.S.C. §102 be withdrawn, and this claim be allowed.

Rejections Under 35 U.S.C. §103

Claims 2 and 5-8 were rejected under 35 U.S.C. §103(a) as unpatentable over *Camp Jr.* in view of *Tomiya et al.*, U.S. Patent No. 6,094,564. Applicant respectfully traverses this rejection.

Claim 2 recites a portable terminal apparatus comprising a first receiving system for receiving a quadrature modulated signal and converting the quadrature modulated signal into an intermediate-frequency signal for output; a second receiving system comprising at least one system for receiving a binary phase shift keying modulated signal and converting the binary phase shift keying modulated signal into an intermediate-frequency signal for output; an intermediate frequency stage for processing both the intermediate-frequency signal of said first receiving system and the intermediate-frequency signal of said second receiving system; and a signal processing system for processing the signal of said first receiving system that has been passed through said intermediate frequency stage and the signal of said second receiving system that has been passed through said intermediate frequency stage, wherein said intermediate frequency stage includes a variable gain amplifier for amplifying the intermediate-frequency signal of said first receiving system and the intermediate-frequency signal of said second receiving system and a quadrature demodulator for subjecting the intermediate-frequency signals that have been passed through the variable gain amplifier to quadrature demodulation for output, wherein said signal processing system includes a phase shifter that generates an I signal and a Q signal by demodulating the intermediate-frequency signal output from said second receiving system so that said I signal and said Q signal coincide with each other in phase.

The Examiner acknowledges that *Camp Jr.* fails to disclose, teach, or suggest at least a variable gain amplifier, and relies on *Tomiya* to remedy this deficiency. In addition, Applicant respectfully submits *Camp Jr.* also fails to disclose, teach, or suggest at least that said signal processing system includes a phase shifter that generates an I signal and a Q signal by demodulating the intermediate-frequency signal output from said second receiving system so that said I signal and said Q signal coincide with each other in phase.

Tomiya discloses a radio communication device that can be switched to receive a variety of different radio communication formats. The radio communication device includes, among other things, a switch 13, a variable-gain amplifier 14, a quadrature demodulator 17, low pass filters 18 and 19, and a band pass filter 22.

Tomiya, however, fails to disclose, teach, or suggest at least that said signal processing system includes a phase shifter that generates an I signal and a Q signal by demodulating the intermediate-frequency signal output from said second receiving system so that said I signal and said Q signal coincide with each other in phase.

In summary, *Camp Jr.* and *Tomiya* either singly or combined fail to disclose, teach, or suggest at least that that said signal processing system includes a phase shifter that generates an I signal and a Q signal by demodulating the intermediate-frequency signal output from said second receiving system so that said I signal and said Q signal coincide with each other in phase. At best, the combined references provided a mobile communication device that includes a GPS Radio Frequency (RF) and a wide bandwidth radiotelephone RF GPS RF signal chip frequency. The phase shifter shifts an output signal of the local oscillator by 90 degrees. There is no teaching or suggestion that any of the quadrature modulated signals have coincident phases. Accordingly, a *prima facie* case for obviousness has not been established.

To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Moreover, obviousness "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." ACS Hosp. Sys. V. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). For at least the above reasons, Applicant respectfully requests that the rejection of claim 2 be withdrawn, and claim 2 be allowed.

Claims 5-8 depend from claim 2. By virtue of this dependency, Applicant submits that claims 5-8 are allowable for at least the same reasons given above with respect to claim 2. In addition, Applicant submits that claims 5-8 are further distinguished over *Camp Jr.* and *Tomiya* by the additional elements recited therein, and particularly with respect to each claimed combination. Applicant respectfully requests, therefore, that the rejection of claims 5-8 under 35 U.S.C. §103 be withdrawn, and these claims be allowed.

Claim 4 was rejected under 35 U.S.C. §103(a) as unpatentable over *Camp Jr.* in view of *Tomiya*, and further in view of *Krishnamoorthy et al.*, U.S. Patent No. 6,839,334. Applicant respectfully traverses this rejection.

Claim 4 depends from claim 2. By virtue of this dependency, Applicant submits that claim 4 is allowable for at least the same reasons given above with respect to claim 2. In

addition, Applicant submits that claim 4 is further distinguished over *Camp Jr.*, *Tomiya*, and *Krishnamoorthy* by the additional elements recited therein, and particularly with respect to each claimed combination. Applicant respectfully requests, therefore, that the rejection of claim 4 under 35 U.S.C. §103 be withdrawn, and this claim be allowed.

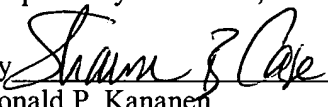
Conclusion

Based on at least the foregoing amendments and remarks, Applicants submit that claims 2 and 4-9 are allowable, and this application is in condition for allowance. Accordingly, Applicants request favorable reexamination and reconsideration of the application. In the event the Examiner has any comments or suggestions for placing the application in even better form, Applicants request that the Examiner contact the undersigned attorney at the number listed below.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2189 from which the undersigned is authorized to draw.

Dated: March 23, 2005

Respectfully submitted,

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